What is claimed is:

1. A piezoelectric ceramic composition comprising $Pb(Ni_{1/3}Nb_{2/3})O_3$, $PbTiO_3$, and $PbZrO_3$, wherein:

a composition of $Pb(Ni_{1/3}Nb_{2/3})O_3$, $PbTiO_3$, and $PbZrO_3$ exists in an area in a triangular coordinate system defined by apexes of $Pb(Ni_{1/3}Nb_{2/3})O_3$, $PbTiO_3$, and $PbZrO_3$, the area being surrounded by lines for connecting a point A (X = 40, Y = 37, Z = 23), a point B (X = 36, Y = 37, Z = 27), a point C (X = 33, Y = 40, Z = 27), and a point D (X = 37, Y = 40, Z = 23), when $Pb(Ni_{1/3}Nb_{2/3})O_3$ amounts to X molar %, $PbTiO_3$ amounts to Y molar %, and $PbZrO_3$ amounts to Z molar % (X + Y + Z = 100).

2. The piezoelectric ceramic composition according to claim 1, wherein the piezoelectric ceramic composition consists of $Pb(Ni_{1/3}Nb_{2/3})O_3$, $PbTiO_3$, and $PbZrO_3$.

3. The piezoelectric ceramic composition according to claim 1, wherein the composition of $Pb(Ni_{1/3}Nb_{2/3})O_3$, $PbTiO_3$, and $PbZrO_3$ exists in an area surrounded by lines for connecting a point E (X = 38, Y = 38, Z = 24), a point F (X = 36, Y = 38, Z = 26), a point G (X = 35, Y = 39, Z = 26), and a point H (X = 37, Y = 39, Z = 24).

4. The piezoelectric ceramic composition according

to claim 1, wherein a piezoelectric displacement d33, which is obtained when a DC electric field of 1 kV/mm is applied in the same direction as that of a polarization axis of the piezoelectric ceramic composition, is not less than 750 pm/V.

5. The piezoelectric ceramic composition according to claim 1, wherein a relative dielectric constant at 1 kHz is within a range of 3550 to 1700.

6. The piezoelectric ceramic composition according to claim 1, further containing La in a ratio of 0.3 to 0.5 % by weight as calculated by conversion into an oxide represented by La_2O_3.

7. A piezoelectric actuator which is formed of the piezoelectric ceramic composition as defined in claim 1.

8. An ink-jet head comprising the piezoelectric actuator as defined in claim 5 and a cavity plate.